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PAUL-J ESATTO JR  
SCULLY SCOTT MURPHY & PRESSER  
400 GARDEN CITY PLAZA  
GARDEN CITY, NY 11530

EXAMINER

NGUYEN, DUNG T

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 12/05/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/363,868

Applicant(s)

Sakamoto

Examiner

Dung Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Aug 29, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above, claim(s) 26-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 18) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_

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***Response to Amendment***

Applicant's amendment dated 07/30/2001 has been received and entered.

Applicant's arguments have been considered but are moot in view of the new grounds of the following rejection.

***Specification***

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada et al., US Patent No. 5,852,485.

Regarding claims 1-7 and 10-16, Shimada et al. disclose an in-plane switching liquid crystal display (LCD) device having:

- a pair of substrate (21, 212);

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- a liquid crystal layer (217) formed therebetween;
- a thin film transistor (TFT);
- a color filter (218);
- a common electrode (213) and a pixel electrode disposed between the color filter and the liquid crystal layer;

Shimada et al. do not disclose an insulating layer forming between the pixel electrode and the common electrode. One skilled in the art would have realized the desire to form an interlayer between two electrodes (e.g. pixel and common electrodes) for insulating such two electrodes. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to form a common electrode under an insulating layer and a pixel electrode over the insulating layer in order to avoid cross-talk between two different electrodes.

Regarding claims 8-9 and 17-18, although Shimada et al. fail to disclose the common electrode forming at the position where the TFT and/or scanning/data signal line formed, so that such component would be hidden from the top view. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form a common electrode at the right position as desired (e.g. over the TFT and/or scanning/data signal line), since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215.

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4. Claims 19-21 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada et al., US Patent No. 5,852,485 , in view of Xu et al., US Patent No. 6,023,317 and Ishikawa et al., US Patent No. 5,677,747.

Regarding the above claims, the modification to the Shimada et al. disclose the claimed invention as described above except for a compensation film disposed between the pair of substrate and polarizing plate. Xu et al. do disclose in figures 1-3 that an optical compensation film (e.g, positive or negative) can be disposed between a substrate and a polaziring film. In addition, Ishikawa et al. disclose a pretilt angle formed by rubbing in which liquid crystal molecules will be felled when applying a voltage (figs. 3-4). Therefore, it would have been obvious to one skilled in the art to employ the optical compensation film in the Shimada et al. device in order to improve viewing characteristics (see abstract).

5. Claims 19-21 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada et al., US Patent No. 5,852,485 , in view of Murai et al., US Patent No. 6,160,604.

Shimada et al. disclose the claimed invention as described above except for an organic based material for the liquid crystal layer. Murai et al. do disclose a liquid crystal material can be added an organic material and injected to the gap between two substrates (col. 7, ln. 26) for forming a liquid crystal layer. Therefore, it would have been obvious to one skilled in the art to add monomer or oligomers into a liquid crystal material as shown by Murai et al. in order to stabilize the rising directions of the liquid crystal molecules (col. 7, lines 27-32).

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***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Dung Nguyen whose telephone number is (703) 305-0423. The fax phone number for this Group is (703) 746-7730.

Any information of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 308-0956.

DN  
11/19/2001

  
William L. Sikes  
Supervisory Patent Examiner  
Group 2871